

REMARKS

Claims 18-25 and 27-34 are pending in the above application. By the above amendment, claims 35 and 36 have been cancelled and claims 37-42 have been added.

The Office Action dated December 14, 2004, has been received and carefully reviewed. The issues raised in that Office Action and the prior art of record were discussed with the examiner during a personal interview on February 8, 2005, and, as an initial matter, the undersigned would like to thank the examiner for the courtesies extended during that interview.

Claims 18-25, 27, 30, 31, 35 and 36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaibeh in view of "Asymmetric ATM-PON Interface Compliant to ITU-T/FSAN Standard for Global Optical Access System" (hereinafter, "Tajima") and Goderis. Claims 28, 29 and 32-34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaibeh in view of Tajima and Goderis and further in view of "Data Link Control Protocols for Wireless ATM Access Channels" (hereinafter, "Narasimhan"). Each of these rejections will be addressed below. However, because claims similar in scope to new claims 37 and 40 were discussed with the examiner during the interview, these remarks begin with a discussion of the new claims. As explained below, claims 37 and 40, and their dependent claims, are submitted to patentably distinguish over Ghaibeh, Tajima, Goderis, Narasimhan and the previously applied reference to Hou.

Claim 37 requires a method for assigning bandwidth in a point to multipoint communication system that includes a master station and a plurality of receiving stations. In one step, a first amount of bandwidth is allocated to a first plurality of the receiving stations in accordance with a static modality. In another step, requests for bandwidth are received from a second plurality of the receiving stations, and bandwidth is assigned to every one of the second plurality of receiving stations that requests bandwidth up to a predetermined guaranteed minimum. Remaining bandwidth not assigned in accordance with the static modality and not assigned in response to a request for bandwidth is allocated among the requesting second plurality of receiving stations.

Hou was previously relied upon to show a guaranteed minimum bandwidth. However, Hou operates without "involvement from the subscriber units" (column 8, lines 31-33). Therefore, Hou does not operate in response to a request for bandwidth as required by claim 37. Hou does not receive requests for bandwidth, and therefore assigns bandwidth to subscriber units whether or not the subscriber unit has a need for bandwidth. It is respectfully submitted that Hou in no manner shows or suggests assigning bandwidth in response to requests up to a guaranteed minimum as required by claim 37.

Ghaibeh has also been cited to show the assignment of a guaranteed minimum bandwidth to a plurality of requesting subscriber or network units. However, the sections of Ghaibeh cited in the December 17th Office Action discuss allocating

bandwidth based on "service types" and "transmission priorities" (column 2, lines 53-54) but do not mention anything comparable to a guaranteed minimum bandwidth being made available to every requesting device as required by claim 37. Thus, as discussed generally during the interview, it appears that according to Ghaibeh, all available bandwidth could be dynamically assigned to certain high priority subscriber units leaving no bandwidth for other subscriber units. Under this system, it cannot be said that the other service types were "guaranteed" any bandwidth at all, much less an amount up to a predetermined minimum bandwidth. Ghaibeh therefore does not show or suggest the claimed step of assigning to every one of a requesting second plurality of receiving stations a requested bandwidth up to a predetermined guaranteed minimum bandwidth, and claim 37 is therefore submitted to patentably distinguish over Ghaibeh.

Goderis, at column 5, lines 33-55, discusses the generation of pseudo constant bit rate requests, but does not show or suggest assigning to every one of a requesting second plurality of receiving stations a requested bandwidth up to a predetermined guaranteed minimum bandwidth as required by claim 37. Claim 37 is submitted to patentably distinguish over Goderis.

Tajima discusses dynamic bandwidth allocation but does not discuss the assigning to every one of a requesting second plurality of receiving stations a requested bandwidth up to a predetermined guaranteed minimum bandwidth as required by claim 37.

As discussed above, none of Hou, Goderis, Ghaibeh or Tajima individually suggest the step of assigning to every one of a requesting second plurality of receiving stations a requested bandwidth up to a predetermined guaranteed minimum bandwidth as required by claim 37. Moreover, it is respectfully submitted that no combination of these references suggests this step. For at least these reasons, it is respectfully submitted that claim 37 and its dependent claims 38 and 39 are allowable over the art of record.

New claim 40 is an apparatus claim that requires a system for assigning bandwidth in a point-to-multipoint communications system including a master station and a plurality of receiving stations that includes a controller that performs several steps. One of these steps is, in response to a request for bandwidth from each of a requesting second plurality of receiving stations, assigning to every one of the requesting second plurality of receiving stations the requested bandwidth up to a predetermined guaranteed minimum bandwidth. This limitation is not shown or suggested by the art of record as discussed above in connection with claim 37. Claim 40 and its dependent claims 41 and 42 are submitted to be allowable for at least the reasons provided above in connection with claim 37.

Returning to the claim rejections raised in the December 17, 2004, Office Action, claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaibeh in view of Tajima and Goderis.

Claim 18 requires, *inter alia*, a method of assigning bandwidth in a point-to-multipoint ATM transmission system having a centralized or Master Station (MS) and a plurality of Peripheral Stations that includes the step of assigning minimum guaranteed bandwidth, previously defined during a connection setup phase, to a portion of peripheral stations sending a request indicating non-empty queues which generates a pending request. The art of record in no manner shows or suggests a step of assigning minimum guaranteed bandwidth as required by claim 18. Claim 18 is therefore submitted to be allowable for at least the reasons provided above in connection with claim 37.

Claims 19-25 and 27-29 depend from claim 18 and are submitted to be allowable for the same reasons as claim 18.

Claim 30 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaibeh in view of Tajima and Goderis. Claim 30 requires a system for assigning bandwidth in a point-to-multipoint ATM transmission system having a centralized or Master Station (MS) and a plurality of Peripheral Stations (PSs). The system assigns time slots using emission of grant messages towards the plurality of Peripheral Stations and includes means for preallocating a certain portion of total bandwidth in a static modality to at least a portion of the plurality of Peripheral Stations. The preallocating represents an assignment of fixed capacity to the portion of the Peripheral Stations on the basis of information about active connections without considering status of queues in

the plurality of Peripheral Stations. The system includes a controller for distributing bandwidth that was not assigned using a static modality to peripheral stations using a two part dynamic modality. The system first assigns minimum guaranteed bandwidth, previously defined during a connection setup phase, to a portion of peripheral stations sending a request indicating non-empty queues which generates a pending request. The system then assigns bandwidth that was not assigned by the static modality or the first dynamic modality equally to all peripheral stations requesting bandwidth. The references of record in no manner show or suggest a system assigning bandwidth in this manner. Moreover, none of the references show a system that assigns a guaranteed minimum bandwidth to each of the requesting Peripheral Stations as required by claim 30. Claim 30 and its dependent claims 31-34 are submitted to be allowable over the art of record for at least this reason.

Claims 28, 29 and 32-34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ghaibeh in view of Tajima and Goderis and further in view of Narasimhan. Claims 28 and 29 depend from claim 18 and claims 32-34 depend from claim 30 and are submitted to be allowable for the same reasons as their base claims as discussed above. Narasimhan does not address the shortcomings of Ghaibeh, Tajima and Goderis discussed above, and claims 28, 29 and 32-34 are submitted to be allowable.

CONCLUSION

Each issue raised in the Office Action dated December 17, 2004, has been addressed, and it is believed that claims 18-25, 27-34, 37-42 are now in condition for allowance. Wherefore, reconsideration and allowance of these claims is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Scott Wakeman (Reg. No. 37,750) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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